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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,159	11/03/2003	Robert T. Long SR.	1547520/69700	9560
26386	7590	10/31/2006	EXAMINER	
DAVIS, BROWN, KOEHN, SHORS & ROBERTS, P.C. THE FINANCIAL CENTER 666 WALNUT STREET SUITE 2500 DES MOINES, IA 50309-3993			GILBERT, WILLIAM V	
		ART UNIT	PAPER NUMBER	
		3635		
DATE MAILED: 10/31/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/700,159	LONG ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	William V. Gilbert	3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 03 November 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-7 is/are rejected.
- 7) Claim(s) 2 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 22 July 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____.                                     |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/16/2005</u> .   | 6) <input type="checkbox"/> Other: _____.                         |

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**DETAILED ACTION**

This is a First Action on the Merits. Claims 1-7 are pending and set forth below.

***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the citizenship of each inventor.

***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, **the "depth indicators", per Claim 5,** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended.

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The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

3. The disclosure is objected to because of the following informalities: Page 6, line 9, the description of Figure 8 is not provided.

Appropriate correction is required.

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***Claim Objections***

4. Claim 2 is objected to because of the following informalities: Page 10, line 13, Applicant states "a the insulation layer". Examiner suggests delete [[a]]. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

In Claim 6, line 15 and Claim 7, line 6, Applicant states "said sinusoidal element further comprising a fiber-reinforced composite article." It is unclear to the Examiner as to whether the sinusoidal element is made from fiber-reinforced composite, or the Applicant intended a sinusoidal element and a fiber-reinforced composite article as two separate structures. Examiner assumed the Applicant intended the former statement and examined these claims accordingly. Clarification is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1, 2, 3, 6 and 7 are rejected under 35 U.S.C. 102(e)**  
as being anticipated by Messenger et al. (U.S. Patent No. 6,701,683 B2).

Regarding Claim 1, Messenger discloses a method for constructing a concrete sandwich panel (Figure 1, element 2) comprising providing a first concrete panel (14) providing a second concrete panel (16), providing an insulation layer (4) between the panels and connecting the concrete layers and the insulation layer using a sinusoidal element of fiber reinforced composite article (10; Page 4, lines 17-23).

Regarding Claim 2, Messenger discloses a method for constructing a concrete sandwich panel (2), by providing an insulation layer (4), installing a sinusoidal element of fiber

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reinforced composite (10), placing the insulation layer with the sinusoidal element on a first concrete layer (14), and placing a second concrete layer (16) on top of the insulation layer.

Regarding Claim 3, Messenger discloses a method for constructing a concrete panel comprising attaching sinusoidal elements (10) to longitudinal reinforcing elements (6, 8; Page 4, lines 17-23) preparing a first concrete layer containing the longitudinal elements (14), placing an insulation layer between the sinusoidal elements (4) and placing a second concrete layer (16) over the insulation layer.

Regarding Claims 6 and 7, Messenger discloses a concrete wall panel without pre-stressed reinforcing rods comprising a first layer of concrete (14) a second layer of concrete (16) a layer of insulation material (4) between the layers of concrete, a sinusoidal element (10) having a top and a bottom end (an inherent feature) the sinusoidal element further comprising a fiber reinforced composite article (Page 4, lines 17-23), the sinusoidal element having the top end located in the first layer of concrete (14) and extending through the insulation layer (4) and having a bottom end embedded in the second layer of concrete (16), and, per Claim 7, the sinusoidal element is not engaged with any pre-stressed reinforcing rods (no pre-stressing is present in the prior art).

**Claim Rejections - 35 USC § 103**

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Messenger et al.

Regarding Claim 4, Messenger discloses a method for constructing a concrete sandwich panel (2) comprising providing a first concrete layer (14) with longitudinal reinforcing elements in place (6), installing an insulation layer (4) over the first concrete layer (14), and placing a second concrete layer (16) with longitudinal reinforcing elements (6) on the insulation layer (4). While Messenger discloses sinusoidal elements (10) in the insulation layer (4), Messenger does not disclose pushing the sinusoidal elements into the insulation layer. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to push the

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sinusoidal elements into the insulation layer because as one provides the first concrete panel (14) and places the insulation layer on the panel, the obvious method of installing the sinusoidal elements would be by pushing the elements into the insulation.

**Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Messenger in view of Foderberg et al (U.S. Publication 2004/0065043).

Regarding Claim 5, Messenger discloses the claimed invention except that the sinuous elements have depth indicators. Foderberg discloses a concrete panel (Figure 2, element 24) where reinforcement (32) contains a depth indicator (Figure 10, element 96; Page 4, Paragraph 0041). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to place depth indicators on the sinuous elements in Messenger. Such indicators would inform one constructing a panel as in Messenger as to how deep the reinforcement should be placed and still provide adequate reinforcement.

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**Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kleinschmidt (U.S. Patent No. 6,202,375).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William V. Gilbert whose telephone number is 571.272.9055. The examiner can normally be reached on Monday - Friday, 08:00 to 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Naoko Slack can be reached on 571.272.6848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WVG

WVh  
24 Oct 2006Bard Kellon  
Patent Examiner  
AU3635

10/24/06